



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/585,155	06/29/2006	Binh Thanh Nguyen	DC10001 PCT 1	8212

137 7590 05/21/2007
DOW CORNING CORPORATION CO1232
2200 W. SALZBURG ROAD
P.O. BOX 994
MIDLAND, MI 48686-0994

EXAMINER

NWAONICHA, CHUKWUMA O

ART UNIT	PAPER NUMBER
----------	--------------

1621

NOTIFICATION DATE	DELIVERY MODE
-------------------	---------------

05/21/2007

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

patents.admin@dowcorning.com

Office Action Summary	Application No.	Applicant(s)	
	10/585,155	NGUYEN, BINH THANH	
	Examiner	Art Unit	
	Chukwuma O. Nwaonicha	1621	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 June 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Current Status

1. Claims 1-16 are pending in the application.

Priority

Applicants' claim for domestic priority under 35 U.S.C. 119(e) is acknowledged.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148

USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

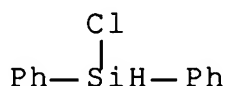
Claims 1-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Barry, {GB 622970}.

Applicants claim a process for preparing diphenylchlorosilanes by the Grignard process comprising contacting a phenyl Grignard reagent, an ether solvent, a

trichlorosilane, and an aromatic hydrocarbon coupling solvent; wherein all the variables are as defined in the claims.

Determination of the scope and content of the prior art (M.P.E.P. §2141.01)

Barry teaches substituted monochlorosilanes of the type $RR'SiHCl$, where R and R' are aryl radical, is made from $SiHCl_3$ (I) and $R'MgX$ (II), 1.0-2.2 mol. equivs. (II)/mol. (I) being used to minimize formation of monoorganodichlorosilanes and triorganosilanes. To (I) 478 grams and C_6H_6 1759 grams are added p-Me C_6H_4MgBr 1450 grams and ether 1682 grams at 0° during 2.25 hours, the mixture stirred several hours., MgX_2 filtered, and the filtrate distilled Monochlorosilanes so made are: di-p-tolyl (yield 41%), b 0.45-0.55 112-117°. One of the synthesized compounds is shown below, and it's used for making fabrics water-repellent, and may be hydrolyzed to form silicones.



Ascertainment of the difference between the prior art and the claims (M.P.E.P. §2141.02)

Barry process for preparing diphenylchlorosilanes by the Grignard process differs from the instantly claimed process in that Barry teaches a process that employs an aromatic hydrocarbon (benzene) as coupling solvent while the presently claimed invention employ toluene as an aromatic coupling solvent. Another difference between applicant claimed invention and that of Barry is that applicants claim a process wherein the mole ratio of the reagent and solvent are specified while Barry specified only the

Art Unit: 1621

mole equivs. of SiHCl_3 and R'MgX as 1.0-2.2 mole that allows the production of less side products. Another difference between applicants claimed invention and that of Barry is that applicants claim a process where ether is used as a solvent while Barry teaches a process wherein ethereal is used as a solvent.

Finding of prima facie obviousness--rational and motivation (M.P.E.P.. §2142-2143)

The instantly claimed process for preparing diphenylchlorosilanes by the Grignard process would have been suggested to one of ordinary skill because one of ordinary skill wishing to obtain diphenylchlorosilanes is taught to employ the process of Barry.

One of ordinary skill in the art would have a reasonable expectation of success in practicing the instant invention by varying the reactants, ratio of the reactants and nonreactants, the solvent and the reaction conditions from the teaching of Barry to arrive at the instantly claimed process for preparing diphenylchlorosilanes by the Grignard process. Said person would have been motivated to practice the teaching of the reference cited because it demonstrates that the process for preparing diphenylchlorosilanes by the Grignard process is useful in industrial applications. The instantly claimed invention would therefore have been obvious to one of ordinary skill in the art.

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11

Art Unit: 1621

F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1-16 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-16 of copending Application No. 10/585,154 in view of Nguyen et al. This is a provisional obviousness-type double patenting rejection.

The presently claimed process for preparing diphenylchlorosilanes by the Grignard process comprising contacting a phenyl Grignard reagent, an ether solvent, a trichlorosilane, and an aromatic hydrocarbon coupling solvent is disclosed in copending Application No. 10/585,154. See claims 1-16 of the copending Application No. 10/585,154.

Although the conflicting claims are not identical, they are not patentably distinct from each other because the scope of the claims overlaps substantially with the scope of claims 1-16 in the copending Application 10/585,154. The claims differ in that the process for preparing diphenylchlorosilanes by the Grignard process comprising contacting a phenyl Grignard reagent, an ether solvent, a trichlorosilane, and an aromatic hydrocarbon coupling solvent of the presently claimed invention employ chlorobenzene as an aromatic coupling solvent while the copending Application No.

10/585,155 employ toluene as an aromatic coupling solvent. Another difference between the presently claimed invention and that of the copending Application No. 10/585,154 is that the copending Application No. 10/585,154 employ 0.1 to 10 a mole ratio of the trichlorosilane to the phenyl Grignard reagent while the presently claimed invention is silent about this in claim 12. These differences are not a patentable distinction because Application No. 10/585,154 teaches the elements of the claimed invention with sufficient guidance, particularity, and with a reasonable expectation of success, that the invention would be *prima facie* obvious to one of ordinary skill in the art.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chukwuma O. Nwaonicha whose telephone number is 571-272-2908. The examiner can normally be reached on Monday thru Friday, 8:30am to 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Johann R. Richter can be reached on 571-272-0646. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

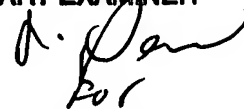
Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should

Art Unit: 1621

you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Chukwuma O. Nwaonicha, Ph.D.
Patent Examiner
Art Unit: 1621

J. PARSA
PRIMARY EXAMINER



Johann R. Richter, Ph.D., Esq.
Supervisory Patent Examiner,
Technology Center 1600